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# (12) United States Patent

Motomura et al.

#### (54) AIR-CONDITIONING APPARATUS

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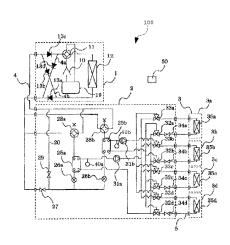
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## (57) ABSTRACT

In an air-conditioning apparatus, when a plurality of pumps are all operating and a heat exchange amount in use-side heat exchangers is equal to or lower than a lower limit of a thermal capacity that can be conveyed in a heat medium circuit B, before at least one of the plurality of pumps is stopped, a refrigerant flow path in the intermediate heat exchanger connected to the pump that is to be stopped is closed. Then, the at least one of the plurality of pumps is stopped, and the thermal capacity required in at least one of the use-side heat exchangers in the rest of the plurality of pumps is conveyed.

### 9 Claims, 12 Drawing Sheets



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